

RECEIVED

FEB 19 2003

1646

TECH CENTER 1600/2900

PTO/SB/21 (08-00)

Approved for use through 10/31/02. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number Of Pages In This Submission	8 PLUS 52 REFS	Application Number	10/068,471
		Filing Date	February 4, 2002
		First Named Inventor	Malcolm Lovell HANDEL
		Group Art Unit	1646
		Examiner Name	To Be Assigned
		Attorney Docket No.	529282000400

ENCLOSURES (check all that apply)

- | | | |
|---|--|---|
| <input type="checkbox"/> Fee Transmittal Form | <input type="checkbox"/> Assignment Papers
(for an Application) | <input type="checkbox"/> After Allowance Communication to Group |
| <input type="checkbox"/> Fee Attached | <input type="checkbox"/> Drawing(s) | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences |
| <input type="checkbox"/> Amendment / Reply | <input type="checkbox"/> Licensing-related Papers | <input type="checkbox"/> Appeal Communication to Group
(Appeal Notice, Brief, Reply Brief) |
| <input type="checkbox"/> After Final | <input type="checkbox"/> Petition | <input type="checkbox"/> Proprietary Information |
| <input type="checkbox"/> Affidavits/declarations | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Status Letter |
| <input type="checkbox"/> Extension of Time Request | <input type="checkbox"/> Power of Attorney, Revocation
Change of Correspondence Address | <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): |
| <input type="checkbox"/> Express Abandonment Request | <input type="checkbox"/> Terminal Disclaimer | <ul style="list-style-type: none">• Form PTO-1449 – 4 pages• 52 References• Return receipt postcard |
| <input checked="" type="checkbox"/> Information Disclosure Statement – 3 pages | <input type="checkbox"/> Request for Refund | |
| <input type="checkbox"/> Certified Copy of Priority Document(s) | <input type="checkbox"/> CD, Number of CD(s) _____ | |
| <input type="checkbox"/> Response to Missing Parts/
Incomplete Application | Remarks | |
| <input type="checkbox"/> Response to Missing Parts
under 37 CFR 1.52 or 1.53 | | |

SIGNATURE OF APPLICANT, ATTORNEY OR AGENT

Firm or Individual Name	Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, California 94304
Signature	Gladys H. Monroy
Date	February 10, 2003

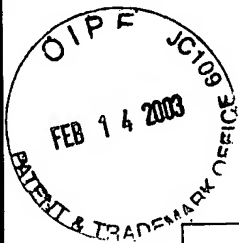
CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on February 10, 2003.

Denise Lade
Denise Lade

Burden Hours Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

pa-762782



9/K.T.
4/28
I.D.S.

PATENT
Docket No. 529282000400

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner for Patents, Washington, D.C. 20231, on February 10, 2003.

Denise Lade
Denise Lade

RECEIVED

FEB 19 2003

TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Malcolm L. HANDEL et al.

Serial No.: 10/068,471

Filing Date: February 4, 2002

For: TREATMENT OF INFLAMMATORY
AND MALIGNANT DISEASES

Examiner: To Be Assigned

Group Art Unit: 1646

INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents are also submitted herewith. The Examiner is requested to make these documents of record.

This Information Disclosure Statement is submitted:

- ☐ With the application; accordingly, no fee or separate requirements are required.
- ☒ Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required.
- ☐ After receipt of a first Office Action on the merits but before mailing of a final Office Action or Notice of Allowance.
 - ☐ A fee is required. A check in the amount of is enclosed.
 - ☐ A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.
 - ☐ A Certification under 37 C.F.R. § 1.97(e) is provided below; accordingly, no fee is believed to be due.
- ☐ After mailing of a final Office Action or Notice of Allowance, but before payment of the issue fee.
 - ☐ A Certification under 37 C.F.R. § 1.97(e) is provided below and a check in the amount of is enclosed.
 - ☐ A Certification under 37 C.F.R. § 1.97(e) is provided below and a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

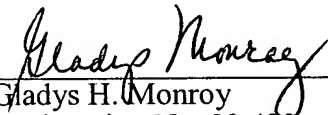
The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

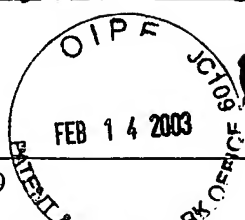
In the unlikely event that the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and

authorize the Assistant Commissioner to charge the cost of such petition and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing 529282000400. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: February 10, 2003

Respectfully submitted,

By: 
Gladys H. Monroy
Registration No. 32,430
Morrison & Foerster LLP
755 Page Mill Road
Palo Alto, California 94304-1018
Telephone: (650) 813-5711
Facsimile: (650) 494-0792



9 / I . D . S .

PTO/SB/08 (2-92)
Sheet 1 of 4

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	Docket Number 529282000400	Application Number 10/068,471
	Applicant Malcolm L. HANDEL et al.	
	Filing Date February 4, 2002	Group Art Unit 1646
	Mailing Date February 10, 2003	

U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO	
	1.	08/25/1992	JP 4235919 Esp@ce summary of document located at < http://gb.esp@ce.net.com >	Japan				
	2.	06/06/1996	WO 96/17086	WIPO				
	3.	11/05/1998	WO 98/49346	WIPO				
	4.	10/07/1999	WO 99/50452	WIPO				
	5.	02/24/2000	WO 00/09672	WIPO				
	6.	02/24/2000	WO 00/09673	WIPO				
	7.	07/20/2000	WO 00/42173	WIPO				

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
	8.	Auphan, N. et al. (1995). "Immunosuppression by Glucocorticoids: Inhibition of NF- κ B Activity Through Induction of I κ B Synthesis," <i>Science</i> 270:286-290.
	9.	Böhrer, H. et al. (1997). "Role of NF κ B in the Mortality of Sepsis," <i>J. Clin. Invest</i> 100(5):972-985.
	10.	Breaker, R.R. and Joyce, G. F. (1994). "A DNA Enzyme with Mg ²⁺ - Dependent RNA Phosphoesterase Activity," <i>Chemistry and Biology</i> 2(10):655-660.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

FEB 19 2003

PTO/SB/08 (2-92)

Sheet 2 of 4

Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 529282000400

Application Number 10/068,471

Applicant

Malcolm L. HANDEL et al.

Filing Date February 4, 2002

Group Art Unit 1646

Mailing Date February 10, 2003

- | | |
|-----|--|
| 11. | Breaker, R.R. and Joyce, G. F. (1995). "A DNA Enzyme that Cleaves RNA," <i>Chemistry & Biology</i> 1(4):223-229. |
| 12. | Brinckerhoff, C.E. (1991). "Joint Destruction in Arthritis: Metalloproteinases in the Spotlight," <i>Arthritis & Rheumatism</i> 34(9):1073-1075. |
| 13. | Brostjan, C. et al. (1996). "Glucocorticoid-Mediated Repression of NF κ B Activity in Endothelial Cells Does Not Involve Induction of I κ B α Synthesis," <i>J. Biol. Chem.</i> 271:19612-19616. |
| 14. | Cai, Z. et al. (1997). "I κ B α Overexpression in Human Breast Carcinoma MCF7 Cells Inhibits Nuclear Factor- κ B Activation but Not Tumor Necrosis Factor- α -Induced Apoptosis," <i>J Biol Chem</i> 272:96-101. |
| 15. | Cairns, M. et al. (1999). "Target Site Selection for an RNA-Cleaving Catalytic DNA," <i>Nature Biotechnol.</i> 17:480-486. |
| 16. | Caldenhoven, E. et al. (1995). "Negative Cross-Talk Between RelA and the Glucocorticoid Receptor: A Possible Mechanism for the Antiinflammatory Action of Glucocorticoids," <i>Mol. Endo.</i> 9(4):401-412. |
| 17. | Carmi, N. et al. (1996). "In Vitro Selection of Self-Cleaving DNAs," <i>Chemistry and Biology</i> 3(12):1039-1046. |
| 18. | Chu, C.Q. et al. (1991) "Localization of Tumor Necrosis Factor α In Synovial Tissues and at the Cartilage-Pannus Junction in Patients with Rheumatoid Arthritis," <i>Arthritis & Rheum</i> 34(9):1125-1132. |
| 19. | Frantz, B. and O'Neill, E.A. (1995). "The Effect of Sodium Salicylate and Aspirin on NF- κ B," <i>Science</i> 270:2017-2018. |
| 20. | Frantz, B. et al. (1994). "Calcineurin Acts in Synergy with PMA to Inactivate I χ B/MAD3, an Inhibitor of NF- χ B," <i>EMBO Journal</i> 13(4):861-870. |
| 21. | Handel, M.L. et al. (1995) "Nuclear Factor- κ B in Rheumatoid Synovium," <i>Arthritis & Rheumatism</i> 38:1762-1770. |
| 22. | Handel, M.L. et al. (1995). "Inhibition of AP-1 Binding and Transcription by Gold and Selenium Involving Conserved Cysteine Residues in Jun and Fos," <i>Proc. Natl. Acad. Sci. USA</i> 92:4497-4501. |
| 23. | Handel, M.L. and Gerlach, W. L. (1996). "D-Penicillamine Causes Free Radical-Dependent Inactivation of Activator Protein-1 DNA Binding," <i>Mol. Pharmacol.</i> 50:501-505. |
| 24. | Handel, M.L et al. (1998) "Inhibition of NF- κ B, but not AP-1, DNA-Binding Activities by Dexamethasone in Explants of Human Osteoarthritic Synovium," <i>Rheumatoid arthritis: Implications for Future Therapy Keystone Symposium</i> pp. 405 (One page only). |
| 25. | Haseloff, J. et al. (1988) "Simple RNA Enzymes with New and Highly Specific Endoribonuclease Activities," <i>Nature</i> 334(18):585-591. |

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

FEB 19 2003

PTO/SB/08 (2-92)

Sheet 3 of 4

TECH CENTER 1600/2900

Form PTO-1449

Docket Number 529282000400

Application Number 10/068,471

**INFORMATION DISCLOSURE CITATION
IN AN APPLICATION**

FEB 14 2003

(Use several sheets if necessary)

Applicant

Malcolm L. HANDEL et al.

Filing Date February 4, 2002

Group Art Unit 1646

Mailing Date February 10, 2003

- | | |
|-----|--|
| 26. | Higgins KA et al. (1993) "Antisense Inhibition of the p65 Subunit of NF- κ B Blocks Tumorigenicity and Causes Tumor Regression," <i>Proc. Natl. Acad. Sci. USA</i> 90:9901-9905. |
| 27. | Kamei, Y. et al (1996). "A CBP Integrator Complex Mediates Transcriptional Activation and AP-1 Inhibition by Nuclear Receptors," <i>Cell</i> 85:403-414. |
| 28. | Kashani-Sabet, M. et al. (1992). "Reversal of the Malignant Phenotype by an Anti-ras Ribozyme," <i>Antisense Research and Development</i> 2:3-15. |
| 29. | Kinne, R.W. et al. (1995). "Synovial Fibroblast-Like Cells Strongly Express Jun-B and C-Fos Proto-Oncogens in Rheumatoid- and Osteoarthritis," <i>Scand J Rheumatol.</i> 24 (supplement 101):121-125. |
| 30. | Kitajima, I. et al. (1992). "Ablation of Transplanted HTLV-I Tax-Transformed Tumors in Mice by Antisense Inhibition of NF- κ B". <i>Science</i> 258:1792-1795. |
| 31. | Koizumi, M. et al. (1989) "Design of RNA Enzymes Distinguishing a Single Base Mutation in RNA," <i>Nucleic Acids Research</i> 17:7059-7071. |
| 32. | Kopp, E. and Ghosh, S. (1994). "Inhibition of NF- κ B by Sodium Salicylate and Aspirin," <i>Science</i> 265:956-959. |
| 33. | Miagkov, A.V. et al. (1998). "NF- κ B Activation Provides the Potential Link Between Inflammation and Hyperplasia in the Arthritic Joint," <i>Proc. Natl. Acad. Sci. USA</i> 95:13859-13864. |
| 34. | Pan, T. and Uhlenbeck, O.C. (1992). "In Vitro Selection of RNAs that Undergo Autolytic Cleavage with Pb ²⁺ ," <i>Biochemistry</i> 31(16):3887-3895. |
| 35. | Poole, B. and Ohkuma, S. (1981). "Effect of Weak Bases on the Intralysosomal pH in Mouse Peritoneal Macrophages," <i>J. Cell Biology</i> 90:665-669. |
| 36. | Raillard, S.A. and Joyce, G.F. (1996) "Targeting Sites Within HIV-1 cDNA with a DNA-Cleaving Ribozyme," <i>Biochemistry</i> 35:11693-11701. |
| 37. | Ray, A. and Prefontaine, K.E. (1994). "Physical Association and Functional Antagonism Between the p65 Subunit of Transcription Factor NF- κ B and the Glucocorticoid Receptor," <i>Proc. Natl. Acad. Sci. USA</i> 91:752-756. |
| 38. | Ruben, S. M. et al. GenBank Accession No. M62399 last updated July 5, 1993, located at http://www.ncbi.nlm.nih.gov , visited on December 20, 2002 (2 pages total). |
| 39. | Santoro, S.W. and Joyce, G.F. (1997). "Mechanism and Utility of an RNA-Cleaving DNA Enzyme," <i>Biochemistry</i> 37:13330-13342. |
| 40. | Santoro, S.W. and Joyce, G.F. (1997). "A General Purpose RNA-Cleaving DNA Enzyme," <i>Proc. Natl. Acad. Sci. USA</i> 94:4262-4266. |
| 41. | Scheinman, R. I. et al. (1995). "Role of Transcriptional Activation of I κ B α in Mediation of Immunosuppression by Glucocorticoids," <i>Science</i> 270:283-286. |

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

PTO/SB/08 (2-92)
pa-681506

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Form PTO-1449

Docket Number 529282000400

Application Number 10/068,471

INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

(Use several sheets if necessary)

Applicant

Malcolm L. HANDEL et al.

Filing Date February 4, 2002

Group Art Unit 1646

Mailing Date February 10, 2003

42. Schütze, S. et al. (1995) "TNF-Induced Activation of NF- κ B," *Immunobiol.* 193:193-203.
43. Shaw, III, C.F. (1979). "The Mammalian Biochemistry of Gold: An Organic Perspective of Chrysotherapy," *Inorg. Perspect. Biol. Med.* 2:287-355.
44. Sugimoto, N. et al. (1995). "Thermodynamic Parameters to Predict Stability of RNA/DNA Hybrid Duplexes," *Biochemistry* 34:11211-11216.
45. Sun, L.Q., et al. (1997) "Anti-HIV Ribozymes," *Mol. Biotechnology* 7:241-251.
46. Sun, L. Q. et al. (1999). "Suppression of Smooth Muscle Cell Proliferation by a c-myc RNA-Cleaving Deoxyribozyme," *J. of Biological Chemistry* 274(24):17236-17241.
47. Symons, R. H. (1992). "Small Catalytic RNAs," *Annu. Rev. Biochem.* 61:641-671.
48. Tsang, J. and Joyce, G.F. (1994). "Evolutionary Optimization of the Catalytic Properties of a DNA-Cleaving Ribozyme," *Biochemistry* 33(19):5966-5973.
49. Wang C-Y et al. (1999). "Control of Inducible Chemoresistance: Enhanced Anti-Tumor Therapy Through Increased Apoptosis by Inhibition of NF- κ B," *Nature Medicine* 5(4):412-417.
50. Warashina, M. et al. (1999). "Extremely High and Specific Activity of DNA Enzymes in Cells with a Philadelphia Chromosome," *Chemistry & Biology* 6(4):237-250.
51. Weigmann, K. et al. (1994) "Functional Dichotomy of Neutral and Acidic Sphingomyelinases in Tumor Necrosis Factor Signaling," *Cell* 78:1005-1015.
52. Yang, J.P. et al. (1995). "Inhibition of the DNA-Binding Activity of NF- κ B by Gold Compounds," *FEBS Letters* 361:89-96.

RECEIVED

FEB 19 2003

TECH CENTER 1600/2900

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.